

Appl. No. 10/531,287
Amendment dated March 21, 2006
Reply to Office Action of September 21, 2006

TAM-103

REMARKS / ARGUMENTSPending Claims

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Claims 1-5 remain pending in this application. Claims 6-20 have been cancelled. Claims 1, 2 and 3 have been amended.

Election

Applicants have cancelled claims 6-20 as being directed to a non-elected invention.

Information Disclosure Statement

Regarding the Information Disclosure Statement filed April 15, 2006, Applicants submitted copies of the references listed on the PTO-1449 Form as indicated by the date stamped receipt, copy enclosed. The missing references will be provided to the Examiner to replace the copies as originally filed as soon as possible.

35 U.S.C. §102

Claims 1-5 are rejected under 35 U.S.C. §102(e) as being anticipated by Tojima, U.S. Patent Publication No. 2003/0005392. Applicants request reconsideration of the rejection in view of the foregoing amendments and for the following reasons.

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The compiler of the present invention is directed to a conversion program that converts first program descriptions that are described by diverting predetermined program language into circuit descriptions. The first program descriptions contain register assignment statements which permit circuit operations to be specified at a cycle precision. The circuit descriptions specify hardware which realizes the circuit operations specified by the first program descriptions in a predetermined hardware description language. See, page 7, lines 1-10 of the specification.

Figure 1 shows a diagram in which pseudo C program 1 having pseudo C descriptions is converted into a pseudo C program stored in storage section 5 whose transformed assignment statement is a register assignment description and executable C descriptions 3 (C program). The C program 3 is converted into hardware description language (HDL) descriptions 4 of register transfer level (RTL). The pseudo C program 1 includes clock boundary descriptions capable of specifying a circuit operation at a cycle precision and a register assignment statement that is capable of parallel descriptions at a statement level. Therefore, pseudo C description as used by applicants differs from native C language descriptions wherein the clock boundary and the register assignment statement are not defined. See, page 20, lines 7-11 of the specification.

Figure 4 is an example of a pseudo C program of the circuit to-be-designed 10 (Fig. 3). A circuit operation description part 11 is shown in Fig. 4. The symbol "\$" signifies the clock boundary description, and the symbol "= \$" signifies the register assignment. The general descriptors or operators of C language are modified in the

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pseudo C program. Therefore the pseudo C program employing these operators is set forth as "program descriptions diverting the C language". See page 27, lines 2-5 of the Specification.

The independent claims 1, 2 and 3 have been amended to set forth that the register assignment statements function to allocate a variable of the left-hand side to a register, and need one clock for assignment from the right-hand side to the left-hand side of the register. That is, the register is assumed to be a sequential circuit and the left-hand thereof can be understood to be a variable which holds the output of the register, which is the value of the last cycle. Further, the right-hand of the register assignment statement is understood to be the register input at the current time. See, page 28, line 15- page 29, line 4 of the specification.

As amended, claims 1-5 are not anticipated by Tojima.

Tojima discloses a method of designing a logic circuit capable of designing hardware from a description written in pure C language by conversion of the functional C description generated in an algorithm-functional C conversion step. However, Tojima does not disclose the register assignment statements of the present invention which function to allocate a variable of the left hand side to a register and need one clock cycle for assignment from the right-hand side to the left-hand side, as set forth by Applicants in amended claims 1-3. Accordingly, the rejection under 35 U.S.C. §102 should be withdrawn.

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Conclusion

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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